UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/729,644	11/30/2000	Glenn Pierce	760100.450	3051

500 7590 08/26/2003

SEED INTELLECTUAL PROPERTY LAW GROUP PLLC
701 FIFTH AVE
SUITE 6300
SEATTLE, WA 98104-7092

EXAMINER
SULLIVAN, DANIEL M

ART UNIT	PAPER NUMBER
1636	14

DATE MAILED: 08/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/729,644	PIERCE ET AL.	
	Examiner	Art Unit	
	Daniel M Sullivan	1636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 June 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-71 and 98-104* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-71 and 98-104* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 June 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

This Office Action is a response to the "Amendment under 37 CFR §1.111" filed 4 June 2003 (Paper No. 14) in reply to the Non-Final Office Action mailed 6 December 2002 (Paper No. 10). Claims 1-71 and 98-104 were considered in Paper No. 10. Claims 1, 4, 10, 36, 98 and 102-104 were amended in Paper No. 14. Claims 1-71 and 98-104 are pending and under consideration.

Response to Amendment

Claim Rejections - 35 USC § 112

Claims 1-71 and 98-104 stand rejected under 35 U.S.C. 112, first paragraph, as lacking an enabling disclosure for reasons of record and herein below in the response to arguments.

Rejection of claim 10 under 35 U.S.C. 112, first paragraph, as lacking adequate written description is withdrawn.

Rejection of claims 5, 6, 8-10, 12, 13, 36 and 102 are rejected under 35 U.S.C. 112, second paragraph, as indefinite is withdrawn.

Claim Rejections - 35 USC § 102

Claims 1-6, 8, 9, 11-13, 23-26, 39-43, 49-55, 57-67, 69 and 98-104 stand rejected under 35 U.S.C. 102(b) as anticipated by The Regents of the University of Michigan (WO 95/22611; hereinafter '611) for reasons of record and herein below in the response to arguments.

Claims 1-9, 11-15, 23-26, 39-43, 49-55, 57-67, 69, 70 and 98-104 stand rejected under 35 U.S.C. 102(e) as anticipated by Goldstein *et al.* (1996) U.S. Patent No. 5,962,427 (hereinafter Goldstein *et al.*) for reasons of record and herein below in the response to arguments.

Response to Arguments

Claim Rejections - 35 USC § 112

Claims 1-71 and 98-104 were rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to use the claimed invention.

In response to the rejection of record, Applicant first argues that the Examiner's assertion that the specification does not teach a patentable utility for the claimed invention other than gene therapy is in error. Applicant argues, "the claimed invention may be used for birth control, and patients may be treated according to the invention with peptide hormones that affect fertility...the claimed invention may be used to provide a structural support for tissue or organ reconstruction or enhancement, and bioactive agents having anti-inflammatory activities may be provided systemically according to the invention to curtail undesirable immune responses to the implant...the specification clearly contemplates using the claimed invention for providing polypeptides, e.g., therapeutic polypeptides, to a patient in contexts other than to replace or supplement a polypeptide that is not being produced at normal levels" (page 13). Thus, Applicant appears to be arguing that expression of peptide hormones that affect fertility, expression of anti-

inflammatory agents or providing polypeptides to a patient other than to replace or supplement a polypeptide is not gene therapy.

This argument has been fully considered but is not found persuasive. First, "gene therapy", as it is commonly understood, is defined as "the insertion of normal or genetically altered genes into cells usually to replace defective genes especially in the treatment of genetic disorders" (Merriam-Webster, online edition). Therefore, gene therapy is not limited only to replacing defective genes but encompasses any therapeutic method comprising insertion of normal or genetically altered genes into cells. More substantially, the claims are directed to a device for systemic delivery of a bioactive agent wherein the bioactive agent comprised by the device is administered in the form of a nucleic acid encoding said bioactive agent, and the specification teaches that the device is to be used therapeutically. Therefore, using the invention for the purposes set forth in the specification requires the expression of a bioactive agent from a nucleic acid at sufficient level and duration to produce a therapeutic effect. For reasons of record, the skilled artisan would have to engage in undue experimentation to use the claimed invention for this purpose.

Next, Applicant asserts that, if the underlying basis of the rejection is that the specification does not enable the use of the claimed device, the legal standard for enablement under 35 USC §112 is the same as for utility under 35 USC §101. Applicant then cites several statements from the M.P.E.P. which indicate that patentable utility does not require a demonstration of clinical efficacy. While Applicant's analysis of the law governing utility under 35 USC §101 is correct, this argument is not persuasive because the claims are not rejected under 35 USC §101. The M.P.E.P. clearly states:

> [i]t is important to recognize that 35 U.S.C. 112, first paragraph, addresses matters other than those related to the question of whether or not an invention lacks utility. The fact that an applicant has disclosed a specific utility for an invention and provided a credible basis supporting that specific utility does not provide a basis for concluding that the claims comply with all the requirements of 35 U.S.C. 112, first paragraph. For example, if an applicant has claimed a process of treating a certain disease condition with a certain compound and provided a credible basis for asserting that the compound is useful in that regard, but to actually practice the invention as claimed a person skilled in the relevant art would have to engage in an undue amount of experimentation, the claim may be defective under 35 U.S.C. 112, but not 35 U.S.C. 101. (M.P.E.P. 2107.01(IV).

The Examiner has not asserted that gene therapy is not a specific, substantial and credible utility, but that, at the time the instant application was filed, the skilled artisan would not have been able to use the instant claimed *in situ* bioreactor for gene therapy without first having to engage in experimentation that is beyond what would be considered routine in the art and therefore the claims lack enablement under 35 USC §112.

Next, Applicant argues that, to the extent that the rejection is based on the absence of working examples, "Applicant's submit that such a demonstration is not necessary to establish enablement for such a use" (page 14). Applicant, citing *Amgen v. Chugai and Genetics Institute,* 927 F.2d 1200 (Fed. Cir. 1991; hereinafter *Amgen*), argues there is no requirement that Applicants provide data for every gene encoding protein or therapeutic protein that may be delivered by the claimed methods. Citing *In re Robins*, 166 U.S.P.Q. 552 (C.C.P.A. 1970) and *In re Borkowski*, 164 U.S.P.Q. 642 (C.C.P.A. 1970), Applicant further argues that it is well established that examples are not required for an enabling disclosure and the first paragraph of § 112 requires nothing more than objective enablement.

These arguments are also not found persuasive. First, the M.P.E.P., also citing *In re Borkowski*, states, "[t]he specification need not contain an example *if the invention is otherwise disclosed in such manner that one skilled in the art will be able to practice it without an undue amount of experimentation*" and "Lack of a working example, however, is a factor to be considered, *especially in a case involving an unpredictable and undeveloped art*" (M.P.E.P. 2164.02; emphasis added). The claims at issue in *In re Borkowski* were directed to a method of preparing oxygenated hydrocarbon. The Examiner asserted the claims were not enabled because the disclosure did not disclose parameters for a chlorination step. The court reversed the decision on the grounds that, considering the nature of the claimed invention (preparation of oxygenated hydrocarbons), the few hours of experimentation required to establish appropriate parameters for the chlorination step are not an undue amount of time. In contrast, the instant claims are directed to a device to be used in a highly unpredictable art. Thousands of investigators working for many years to overcome the barriers to obtaining therapeutic expression of proteins *in vivo* have shown very little progress. As pointed out in the previous Office Acton, the instant disclosure provides no results that would indicate that the claimed apparatus provides any advantage over the known delivery methods. In fact, the disclosure does not even address the problems that have proved most intractable, i.e., level and persistence of gene expression. Clearly the invention is not otherwise disclosed in such manner that one skilled in the art will be able to practice it without an undue amount of experimentation; therefore, the lack of a working example is a factor to be considered.

With regard to *Amgen*, the court actually found that claims to a generic product were not enabled because, although it is not necessary that a patent applicant test all the embodiments of

his invention, it is necessary that he provide a disclosure sufficient to enable one to carry out the invention commensurate with the scope of the claims (see especially page 1027). According to the decision in *Amgen*, enablement must be commensurate with the scope of the claims. The instant claims are directed to an *in situ* bioreactor comprising a nucleic acid molecule encoding a bioactive agent selected from the group consisting of: a transcription factor, a chemotactic factor, an angiogenic factor, an antisense molecule, a ribozyme, an anti-apoptotic molecule, a growth factor, a cytokine, an extracellular matrix molecule, a cell adhesion protein, a cell retention agent, a cell surface receptor, transforming growth factor (TGF) family members, fibroblast growth factor (FGF) family members, platelet derived growth factor (PDGF) family members, insulin like growth factor (IGF) family members, vascular endothelial growth factor (VEGF) family members, hepatocyte growth factor (HGF) family members, epidermal growth factor (EGF) family members, colony stimulating factor (CSF) family members, angiopoietin, interleukin, bone morphogenetic factor (BMP) family members, growth hormone, insulin, atrial natriuretic peptide (ANP), luteinizing hormone, follicle-stimulating hormone, releasing hormones, inhibin, relaxin, activin, follitropin, Factor V (FV), Factor VII, (FVII), Factor VIII (FVIII), Factor IX (FIX), Factor X (FX), Factor XI (FXI), Factor XIII (FXIII), erythropoietin (EPO), growth hormone (GH), adenosine deaminase, thrombopoietin, purine nucleoside phosphorylase (PNP), Protein C, Protein S, an interleukin, an interferon, a globin, an antibody, an antibody fragment, tissue plasminogen activator, plasminogen, plasmin, urokinase, streptokinase, thrombomodulin, Protein C activating agents and antithrombin. As the disclosure must enable the full scope of the claims, the enabling disclosure must teach the skilled artisan how to use each of the claimed embodiments. Clearly it does not. Therefore, even if the disclosure were enabling for any one of

the claimed embodiments, which it is not, according to *Amgen* the claims would still lack enablement because the disclosure does not provide an enabled use for the full scope of the claimed subject matter.

Applicant cites published articles, which allegedly demonstrate that the instant claimed device could be used for gene therapy as contemplated in the specification. Applicant cites two articles that teach gene therapy of SCID: Blaese *et al.* (1995) *Science* 270:475-480, which teaches treatment comprising transfer of adenosine deaminase into T cells of children affected with ADA-SCID; and Cavazzana-Calvo *et al.* (2000) *Science* 288:669-672, which teaches treatment of SCID-X1 comprising transfer of a γc transgene into T lymphocytes. However, even assuming, *arguendo*, that the treatment of SCID according to the methods of Blaese *et al.* and Cavazzana-Calvo *et al.* is fully enabled, the skilled artisan would not expect to be able to use the instant claimed *in situ* bioreactor to treat ADA-SCID or SCID-X1 without engaging in undue experimentation. First, the methods of Blaese *et al.* and Cavazzana-Calvo *et al.* involve transfer a transgene directly into the affected cells. Thus, in the methods of Blaese *et al.* and Cavazzana-Calvo *et al.* correction of the genetic defect is targeted. Furthermore, the art recognizes that relative success obtained in treatment of SCID using genetically modified T cells is probably due to the selective advantage provided the genetically modified cells by correction of the defective gene therein. Somia *et al.* (2000) *Nature Rev. Genet.* 1:91-99, commenting on the findings of Cavazzana-Calvo *et al.*, states, "the success with SCID-X1 is probably owing to the strong selective advantage provided to the transduced lymphoid progenitors. Only those haemtaopoietic cells that express the γc receptor subunit can survive and differentiate" (page 96, column 1). In contrast, the instant invention is directed to an apparatus for systemic delivery of a bioactive

agent, presumably in this case ADA or γc, which would require expression of the transgene at much higher levels than required in the methods of Blaese *et al.* and Cavazzana-Calvo *et al.* Furthermore, cells modified using the instant *in situ* bioreactor would not be expected to benefit from the selective advantage which Somia *et al.* credit for the relative success reported by Cavazzana-Calvo *et al.* Given the art recognized problems encountered in obtaining sustained expression of transgenes at therapeutically effective levels, the skilled artisan would not predict that either of ADA-SCID or SCID-X1 could be treated using the instant claimed bioreactor without significant, and clearly undue, additional experimentation. Furthermore, even if the art cited by applicant enabled the skilled artisan to use the instant *in situ* bioreactor to treat SCID, the claims would not be enabled for the full scope of the claimed subject matter because the skilled artisan still would not know how to use the vast majority of the claimed embodiments of the invention.

Applicant also cites Roth *et al.*(1996) *Nature Med.* 2:985-991, which teaches treatment of non-small cell lung cancers by direct injection of a retroviral vector expressing the wild-type p53 gene. However, as was the case in the treatment of SCID, the method of Roth *et al.* involves the delivery of the transgene directly into the affected cells. Furthermore, therapy of cancer involving expression of a toxic gene directly in cancer cells is uniquely well suited to a gene therapy approach because expression of the transgene need only be of sufficient level and duration to kill the cell in which the transgene resides. In contrast, the instant claimed invention is a device for the systemic delivery of a bioactive agent, presumably p53 in this case. Given that the device is to be used for systemic delivery of the bioactive agent, in which case expression of the transgene would have to be of much greater magnitude and duration that was required in the

method of Roth *et al.*, the skilled artisan would not expect to be able to use the instant claimed bioreactor to treat non-small cell lung cancers without significant, and clearly undue, additional experimentation. Furthermore, even if the art cited by applicant enabled the skilled artisan to use the instant *in situ* bioreactor to treat non-small cell lung cancer with a p53 transgene, the claims would not be enabled for the full scope of the claimed subject matter because the skilled artisan still would not know how to use the vast majority of the claimed embodiments of the invention.

Applicant cites Kay *et al.* (2000) *Nature Genet.* 24:257-261, which teaches treatment of hemophilia using a Factor IX transgene delivered into muscle using an AAV vector. However, in the paragraph bridging pages 259 and 260, the authors state that their findings "indicate that AAV-mediated gene therapy for haemophilia B is safe and *has the potential to demonstrate efficacy*". Given teachings found in Kay *et al.* the skilled artisan would not reasonably expect to be able to use the claimed *in situ* bioreactor to treat hemophilia. Significantly, because Kay *et al.* was published after the instant application was filed, Kay *et al.* goes on to state, "[i]n the broader context of gene-based treatment of inherited diseases, the record so far has been discouraging, with no clear-cut evidence of success with *in vivo* gene therapy" (paragraph bridging pages 259 and 260). Therefore, Kay *et al.* clearly provides that, at the time the instant application was filed, there were no unequivocal successes in the field of gene therapy and therefore no reasonable expectation of success in treating any condition by gene therapy. Furthermore, even if the art cited by applicant enabled the skilled artisan to use the instant *in situ* bioreactor to hemophilia using Factor IX, the claims would not be enabled for the full scope of the claimed subject matter because the skilled artisan still would not know how to use the vast majority of the claimed embodiments of the invention.

Finally, Applicant cites a teaching from Crystal (1995) *Science* 270:404-405 which states, "most studies have shown that genes can be transferred to humans whether the strategy is *ex vivo* or *in vivo*, and that all vector types function as intended. Taken together, the evidence is overwhelming, with successful human gene transfer having been demonstrated in 28 *ex vivo* and 10 *in vivo* studies." However, this teaching is not persuasive because the Examiner has not asserted that it would require undue experimentation to transfer a gene to humans. As stated in the previous Office Action, "While it is relatively routine in the gene transfer art to achieve expression at non-therapeutic levels (i.e. levels providing no patentably useful phenotypic effect), the skilled artisan would have to engage in trial and error experimentation *to achieve expression of a particular molecule at levels sufficient for therapeutic effect*" (bridging pages 9-10; emphasis added). Crystal teaches that successful *gene transfer*, not *gene therapy*, can be routinely achieved. In fact, when the teachings of Kay *et al.* (*Id.*), which indicate no clear-cut evidence of success with *in vivo* gene therapy as of 2000, are viewed in context of the statements by Crystal, which indicate that successful gene transfer was routine in 1995, it is clear that the barriers to achieving successful gene therapy go far beyond obtaining gene transfer.

Applicant's final argument for enablement of the claimed subject matter is that "the specification details how to construct and combine each element of the claimed devices...[and] clearly demonstrates effective cellular infiltration and gene expression using the claimed device. Applicants submit that the production and optimization of the claimed devices would, therefore, only require merely routine optimization and testing" (page 16). Thus, Applicant seems to be arguing that because the specification teaches how gene transfer can be achieved *in vivo*, which Crystal teaches was routine in 1995, using the claimed invention for the stated purpose of gene

therapy would require only that the skilled artisan optimize the invention. However, the magnitude of experimentation required to "optimize" the claimed invention is clearly illustrated by the fact that five years after Crystal declared gene transfer to be routine, Kay *et al.* teaches "no clear-cut evidence of success with *in vivo* gene therapy".

Thus, for reasons of record, the amount of experimentation required to use any single embodiment of claimed invention, let alone the full scope of the claimed invention, for the purposes set forth in the specification would clearly require the skilled artisan to engage in experimentation beyond the routine. Therefore, the claims stand rejected under 35 U.S.C. §112, first paragraph, as lacking an enabling disclosure.

Claim Rejections - 35 USC § 102

Claims 1-6, 8, 9, 11-13, 23-26, 39-43, 49-55, 57-67, 69 and 98-104 were rejected under 35 U.S.C. 102(b) as anticipated by The Regents of the University of Michigan (WO 95/22611; hereinafter '611); and claims 1-9, 11-15, 23-26, 39-43, 49-55, 57-67, 69, 70 and 98-104 were rejected under 35 U.S.C. 102(e) as anticipated by Goldstein *et al.* (1996) U.S. Patent No. 5,962,427 (hereinafter Goldstein *et al.*).

In response to the rejection of record, Applicant has amended the claims 1, 98, 103 and 104 such that they recite the limitation "wherein the bioreactor is adapted for systemic delivery of the bioactive agent" in the body of the claim and argues that the art does not anticipate the claims because the bioreactors disclosed therein are not adapted for the systemic

delivery of bioactive agents. Applicant further submits that the cited art provides no recognition that the devices disclosed therein can be used for the systemic delivery of a bioactive agent.

These arguments have been fully considered but are not found persuasive because the disclosure provides no definition of "adapted for systemic delivery of the bioactive agent" that would exclude the *in situ* bioreactors disclosed in the '611 publication and in Goldstein *et al.* Both publications teach a device for the *in situ* delivery of secreted proteins and implantation of the device into an animal. There is no reason to believe that the device would not be able to deliver proteins into the circulation of the animal. Therefore, absent evidence to the contrary, the devices disclosed in the art are as adapted for systemic delivery as the instant claimed invention. Applicant's arguments in support of the distinction based on adaptation for systemic delivery do not cite any specific adaptations set forth in the instant disclosure, but instead rely on the failure of the art to teach that the devices set forth therein should be used for systemic delivery. This amounts to arguing that the claimed products are different from the products set forth in the art because the intended use is different. However, it is well established that if a prior art structure is capable of performing the intended use then it meets the claim. See, e.g., In re Schreiber, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997).

Applicant cites *Ex Parte Conner*, 215 U.S.P.Q. 384 (BPAI, 1981) and submits "that the claimed devices are adapted for systemic delivery has been consistently recognized by the courts as a limitation that must be considered in determining patentability". This argument is not found persuasive because the decision in *Ex Parte Conner* is relevant only to obviousness under 35 U.S.C. §103, not anticipation under 35 U.S.C. § 102, as is the instant case. In *Ex Parte Conner*, the Board found that compositions "adapted for application to the human skin" were not obvious

over the prior art because "the references relied upon by the Examiner do not disclose benzalphthalide in combination with a cosmetic oil carrier which compositions are suitable for application to the human skin. The various compositions of several of the references contain additional ingredients, e.g. sodium hydroxide or styrene, which would have rendered the compositions unsuitable for application to the human skin" (page 384). Thus, in *Ex Parte Conner*, the claimed invention was found to be non-obvious because the primary reference did not teach all of the limitations of the claim and the compositions disclosed in the secondary references could not be applied to human skin. In contrast, each of the cited references teach all of the instant claim limitations and, as the product disclosed in the art anticipates the claimed product, the failure of the art to disclose the same intended use does not distinguish the claims from the art. There is nothing on the record that would indicate that the devices disclosed in the '611 publication and in Goldstein *et al.* are not as adapted for systemic delivery of a bioactive agent as the instant claimed device, therefore the art anticipates the claim.

Applicant further notes that the instant application defines "bioactive agent" as any polypeptide based substance whose systemic availability over a period of time is desired or whose targeted delivery is effectuated through the circulation. Thus, Applicant appears to be arguing that the instant "bioactive agent" is different from the agents delivered in the cited art. Clearly this cannot be the case because the art specifically names many of the same agents set forth in the instant claims as "bioactive agents" (see e.g., Goldstein *et al.*, column 14 and '611, bridging pages 13-14). As the agents disclosed by the art are the same as the bioactive agents named in the instant application, the art anticipates the instant "bioactive agent" and, for reasons of record, the claimed invention as a whole.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel M Sullivan whose telephone number is 703-305-4448. The examiner can normally be reached on Monday through Friday 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Remy Yucel, Ph.D. can be reached on 703-305-1998. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

dms

JAMES KETTER
PRIMARY EXAMINER